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A NEW SPECIES OF *PARASCOTIA* WITH NOTES ON THE GENERA *MYCTEROPHORA* AND *PARASCOTIA* (LEPIDOPTERA: NOCTUIDAE: INCERTAE SEDIS)

JOHN G. FRANCLEMONT

Department of Entomology, Cornell University, Ithaca, New York 14853.

Abstract.—A new species of *Parascotia* Hübner, *mineta*, is described, and the relationship and placement of the genera *Mycterophora* Hulst and *Parascotia* are discussed.

The two genera discussed were not associated as related taxa until the 1983 North American Check List of Lepidoptera (Hodges et al., p. 122) in which Franclemont and Todd placed them next to one another.

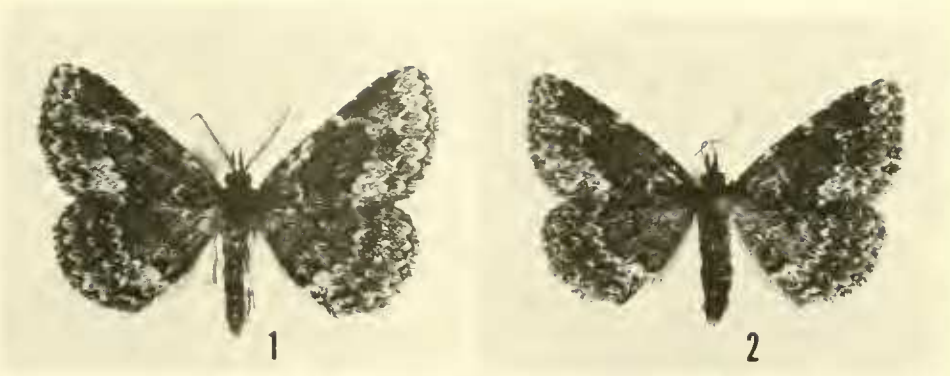
The venation of *Parascotia* Hübner and *Mycterophora* Hulst is essentially the same. In the hind wing M_2 arises well away from M_3, but below the middle of the discocellular veins, the intermediate, not quadrifid, condition and would cause the genera to be associated with either the Herminiinae or the Acontiinae. The affinities of the two genera are very problematical and will remain so until the vast complex of genera in the Catocalinae (including Ophiderinae), Acontiinae, and Herminiinae are carefully studied and the relationships among all the genera are resolved.

Parascotia Hübner

Parascotia Hübner, 1816 [1825]. Verzeichniss bekannter Schmettlinge [sic]: 314.

Type-species.—*Geometra carbonaria* [Denis & Schiffermüller], 1775. Designated by Warren, 1913, as *Phalaena Geometra fuliginaria* Linnaeus, 1761, with *Phalaena Geometra carbonaria* Esper [1799], = *Geometra carbonaria* [Denis & Schiffermüller], shown as a synonym. *Phalaena Geometra fuliginaria* Linnaeus was not one of the originally included species.

[Note: *Geometra carbonaria* [Denis & Schiffermüller] is technically a nomen nudum; if it were so treated, the species name would be attributed to Fabricius, 1787, where the original combination is *Phalaena carbonaria*. The Denis and Schiffermüller names have been discussed by Lempke (1952), and I am in agreement with his conclusions. Through the kindness of I. W. B. Nye of the Department of Entomology, British Museum (Natural History), I have been permitted to study a manuscript of K. Sattler and W. G. Tremewan (now published, 1984) on the "Wiener Verzeichniss" names. Inasmuch as the work is concerned only with European species, I believe that the question of "nomina nuda or not" should be settled to the satisfaction of European lepidopterists.]



Figs. 1, 2. *Parascotia mineta*. 1, Male. 2, Female.

Boletobia Boisduval, 1840. Genera et Index Methodicus Europaeorum Lepidopterorum: 201.

Type-species.—*Geometra carbonaria* [Denis & Schiffermüller], 1775. Monobasic. [*Geometra carbonaria* [D. & S.] is considered a junior subjective synonym of *Phalaena Geometra fuliginaria* Linnaeus, 1761.]

Bolitobia Agassiz, 1846 (1847). Nomenclatoris Zoologicii, Index Universalis: 48. An emendation of *Boletobia* Boisduval.

Type-species.—Ipso facto *Geometra carbonaria* [Denis & Schiffermüller], 1775.

Kara Matsumura, 1925. J. Coll. Agric. Hokkaido Imper. Univ. 15: 160.

Type-species.—*Kara sachalinensis* Matsumura, 1925. Original designation and monobasic. [*Kara sachalinensis* Matsumura is considered a junior subjective synonym of *Phalaena Geometra fuliginaria* Linnaeus, 1761, and ipso facto of *Geometra carbonaria* [Denis & Schiffermüller], 1775.]

Preoccupied by *Kara* Stebel, 1910.

The moths are geometriform with long, porrect palpi; the antennae of the males are pectinate, the rami shortening toward the apex; the antennae of the females are simple. In these characters the moths are very similar to those of *Mycterophora*. The venation is essentially like that of *Mycterophora*, but in the hind wing M_3 and CuA_1 are short stalked, whereas in *Mycterophora* the two veins arise separately from the discal cell. The tympanal hood, if it can be so considered, appears to be membranous, and the spiracle of the first abdominal segment is of uncertain position. In some specimens it appears to face the tympanum and in other specimens to face laterally. This anomalous condition can probably be attributed to the deformation of the membranous areas brought about when the specimens dry after being caught and killed. In slide mounted preparations it appears lateral, but unlike any of the Herminiinae that I am familiar with, although it is suggestive of the group. *Mycterophora* has the spiracle inside, enclosed by, the small, well sclerotized hood.

The larva of the Eurasian *fuliginaria* is well known in Europe and has been described and figured many times. Two colored figures may be found in Spuler

(1910, vol. 4, pl. 38, fig. 10, and pl. 49, fig. 25). The larva lacks the prolegs on abdominal segments 3 and 4, and is a semi-looper; the hairs are long and curved. Swain (1950, p. 186–200) gives an excellent account of the life-history with figures of all the stages as well as of the very interesting cocoon suspended by a silk thread at each end. The hosts of the larva are given by South (1961, p. 387) as "*Polystitus versicolor, P. abietinus, Polyporus schweinitzii, P. betulinus, Corticum vagum, Stereum hirsutum, Daldinia concentrica,* and *Paxillus panoides.*"

Parascotia mineta Franclemont, New Species

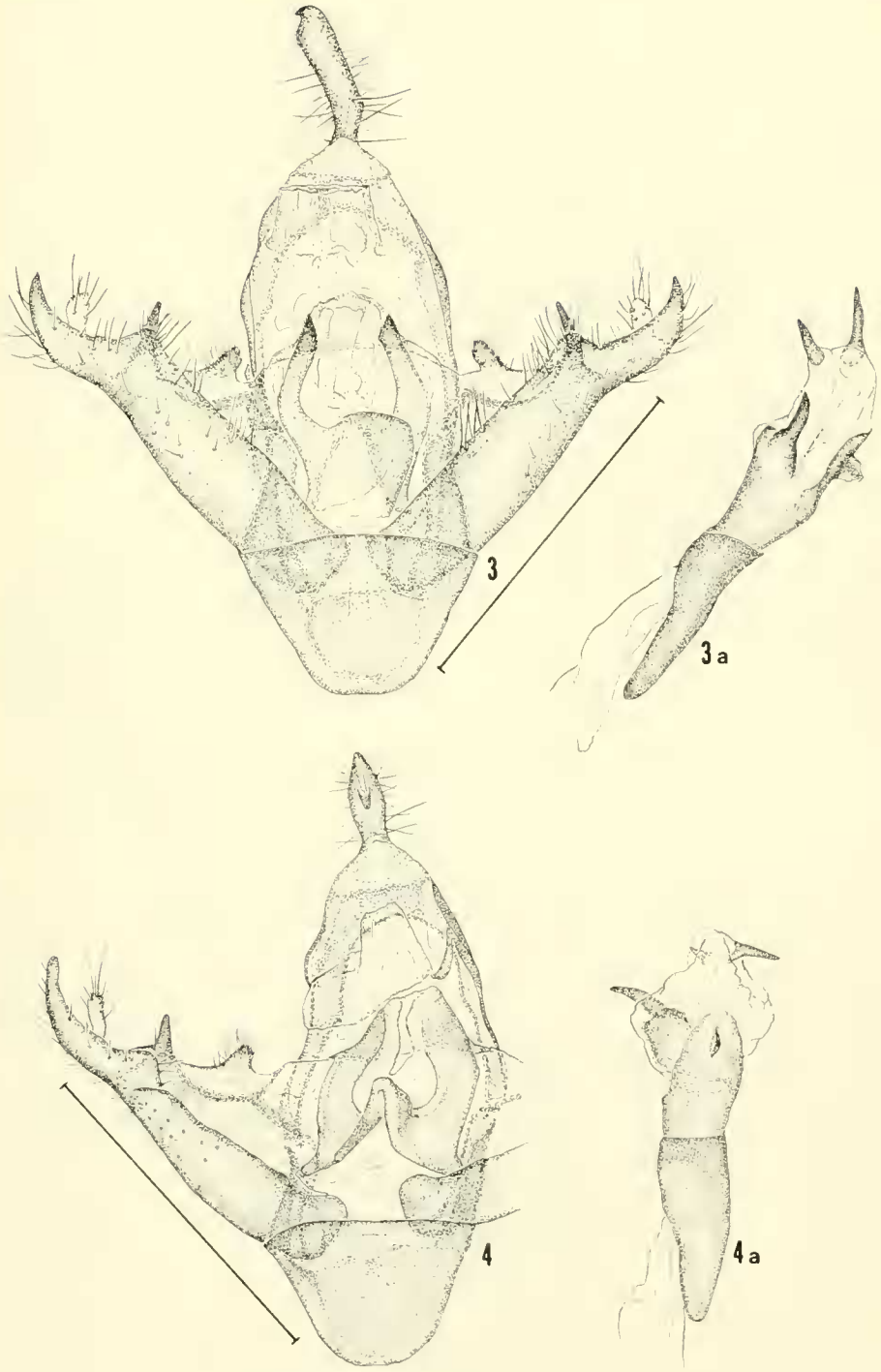
(minetus—patient)

Parascotia fuliginaria; Franclemont & Todd, *in* Hodges et al., 1983: 122; not Linnaeus, 1761. Misidentification.

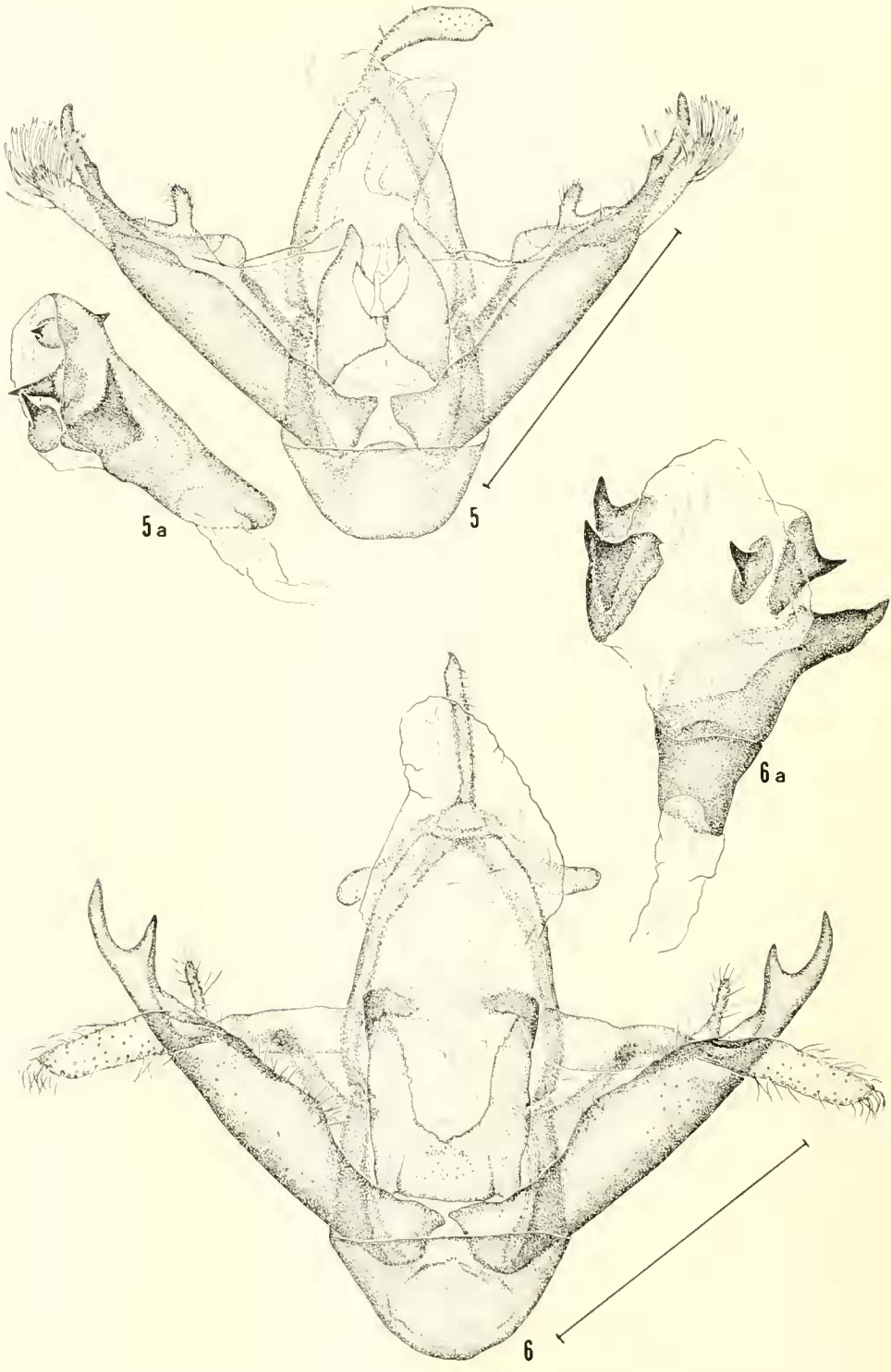
This species was first seen in 1973; intermittently over the past 12 years 15 specimens have been collected at blacklights in an area of gardens, pasture, and woodlands.

Diagnosis.—The species is fragile, very geometriform in appearance; it may be in other collections among undetermined Geometridae, or possibly confused with species of *Mycterophora.* I first decided that it was an undescribed species, but then decided, incorrectly, that it must be the Eurasian *fuliginaria.* Superficially it differs from that species by the more extensive pale areas on the wings, especially the patches on the inner margins near the anal angles, between the postmedial and subterminal lines of fore and hind wings. The male genitalia of *mineta* and *fuliginaria* (Figs. 3, 4) differ in many subtle ways and a few that are obvious; most notable in the latter category is the very different juxta of each species. The female genitalia of the two species are apparently very similar; I know those of *fuliginaria* only from figures. *P. mineta* appears somewhat similar to *nisseni* Turati (1907, p. 34, pl. 1, figs. 18, 19), a Palearctic, Atlanto-Mediterranean species known from Morocco, Algeria, Sicily, Sardinia, Corsica, and the littoral of Provence, France (Dufay, 1962, p. 222). I know the species only from figures, a colored figure in Warren (1913, pl. 71, fig. c [1]), a photograph in Dufay (1962, pl. 5, fig. 31), and the figures accompanying the original description. The photograph in Dufay's paper is the best illustration of the species; those in Turati's paper are somewhat blurred. Although *nisseni* has considerably more yellowish white in its pattern than *fuliginaria,* the pale areas are not distributed like those of *mineta,* and further *nisseni* appears to be a smaller moth.

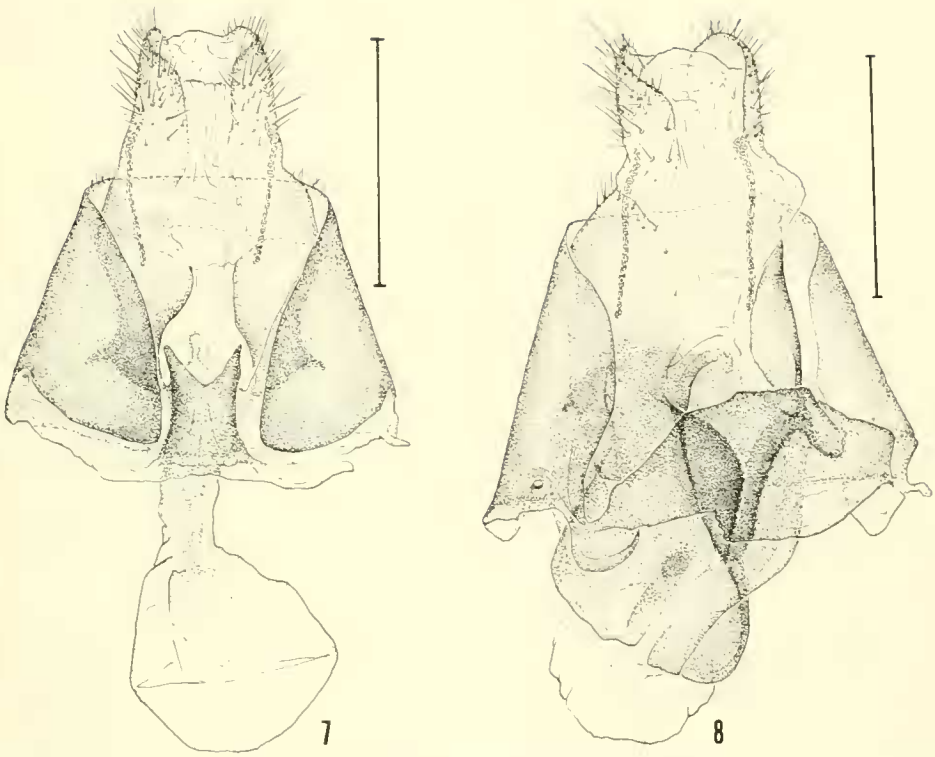
Description: Head, thorax, abdomen, and wings above sooty black; metathoracic tuft an admixture of pale and metallic scales; abdominal tufts present on second and third segments, pale; transverse lines and other markings of wings pale, white, cream-white, or pale fuscous white with a greater or lesser overlay of fuscous scales; fore wing with antemedial line irregular, curved, whitish with some black scales on outer side; median shade or line absent; postmedial line straight immediately below costa, sharply outcurved, then roundly outcurved and incurved to inner margin, whitish with black scales on inner side; subterminal line lunulate, parallel to outer margin, whitish; terminal line undulate, black with white scales on inner side; fringe checkered, sooty black and whitish; reniform a black bar; orbicular not evident; two pale dots on costa between antemedial and postmedial lines, three pale dots on costa between postmedial and subterminal



Figs. 3, 4. Figs. 3, 3a. *Parascotia mineta*. 3, Male genitalia, aedeagus removed. 3a. Aedeagus. Figs. 4, 4a. *Parascotia fuliginaria*. 4, Male genitalia, aedeagus removed. 4a, Aedeagus.



Figs. 5, 6. Figs. 5, 5a. *Mycterophora monticola*. 5, Male genitalia, aedeagus removed. 5a, Aedeagus. Figs. 6, 6a. *Mycterophora inexplicata*. 6, Male genitalia, aedeagus removed. 6a, Aedeagus.



Figs. 7, 8. Fig. 7. *Parascotia mineta*, female genitalia. Fig. 8. *Mycterophora inexplicata*, female genitalia.

lines; conspicuous pale patch between postmedial and subterminal lines near inner margin; hind wing with markings a continuation of those of fore wing, with conspicuous pale patch in same relative position as that on fore wing. Beneath sooty fuscous with much pale scaling toward outer margin, especially on hind wing; postmedial line broad, black, pale on outer side; subterminal line broad, black, pale on outer side; discal spots present on both fore and hind wings.

Fore wing length.—10.5–15 mm, most specimens 12–14 mm. (Illustrated male 14 mm, female 13 mm.)

Male genitalia.—Figs. 3, 3a.

Female genitalia.—Fig. 7.

Holotype.—♂. Snyder Heights 1100 ft., Ithaca, Tompkins County, New York; 22 July 1984; J. G. Franclemont. Franclemont collection.

Paratypes.—10 ♂, 3 ♀. All same locality as holotype; 1 ♂ 18 June 1977, others various dates in July from 10–31, 1973–1984; J. G. Franclemont. Franclemont collection.

In addition to the type series the species has been seen only from the following locations in New York State, "near Ithaca," Tompkins Co., the vicinity of Geneva, Ontario Co., Palmyra, Wayne Co., and Black Creek, 2 miles west of Voorheesville, Albany Co.

T. L. McCabe reared the larva on a pore fungus on a log from eggs laid by a

female from the Voorheesville location. The larvae hibernated while still small; they were left on the log over the winter. Only one larva was recovered in the spring; unfortunately, this disappeared before becoming fully grown.

Mycterophora Hulst

Mycterophora Hulst, 1896. Trans. Am. Entomol. Soc. 23: 298.

Type-species.—*Mycterophora monticola* Hulst, 1896. Original designation.

The males of the species of this genus show great similarity to the males of *Parascotia* in the structure of the genitalia, but the membranous, digitiform lobe of the valve is on the ventral or inner side, not on the dorsal or outer side as in *Parascotia*; the costa of the valve has one projection, in *Parascotia* two; the juxta has little or no indication of a median bulla, so conspicuous in *Parascotia*; the cornuti of the vesica are four in number, much larger and stouter than the three found in *Parascotia*. The female genitalia of *Mycterophora* and *Parascotia* (Figs. 7, 8) are strikingly different; the antevaginal plates, the ducti bursae, and the bursae are noticeably dissimilar.

The differences in the female genitalia and the position of the spiracle of the first abdominal segment in relation to the tympanal hood are the essential reasons for maintaining the two genera as discrete taxa.

Mycterophora, insofar as known, is restricted to North America where five species are recognized. Only one of these, *inexplicata* Walker, occurs in eastern North America and might possibly be confused with the new species of *Parascotia*.

The larva of only one species is apparently known. Dyar (1904, p. 877) described the egg and first through third larval instars of *longipalpata* Hulst reared at Kaslo, British Columbia. Like *P. fuliginaria* the larva lacks the prolegs of the third and fourth abdominal segments. Dyar's description of the third instar probably gives a fairly accurate suggestion of the appearance of the fully grown larva. The "soft, pale, long, curved hair" is like that of *fuliginaria*. The food was ". . . green lichens growing on damp wood."

A synopsis of the species follows:

Mycterophora inexplicata (Walker)

Scotosia inexplicata Walker, 1862. List of the Specimens of Lepidopterous Insects in the Collection of the British Museum, part 26: 1722.

Type-locality.—"New York. Presented by E. Doubleday, Esq." [Trenton Falls, Oneida Co.]

Mycterophora slossoniae Hulst, 1898. Can. Entomol. 30: 120.

Type-locality.—"White Mountains, N. H.; from Mrs. Slosson. Winnipeg, Man.; from Mr. Hanham."

Male genitalia.—Figs. 6, 6a.

Female genitalia.—Fig. 8.

Mycterophora geometriformis Hill

Mycterophora geometriformis Hill, 1924. Bull. So. Calif. Acad. Sci. 23: 185, pl. 3, fig. 12.

Type-locality.—"Mt. Lowe, 5000 feet elevation, Los Angeles County, Calif., at light."

Mycterophora monticola Hulst

Mycterophora monticola Hulst, 1896. Trans. Am. Entomol. Soc. 23: 299.

Type-locality.—"Sierra Nevada, California."
Male genitalia: Figs. 5, 5a.

Mycterophora rubricans Barnes & McDunnough

Mycterophora rubricans Barnes & McDunnough, 1918. Contributions to the Natural History of the Lepidoptera of North America 4: 123, pl. 18, figs. 1, 2.

Type-locality.—"Monachee Meadows, Tulare Co., Calif., 5 ♂, 8 ♀. Types, Coll. Barnes."

Mycterophora longipalpata Hulst

Mycterophora longipalpata Hulst, 1896. Trans. Am. Entomol. Soc. 23: 299, pl. 11, fig. 13.

Type-locality.—"Soda Springs, Siskiyou County, California. From Mr. Behrens, July 19."

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